

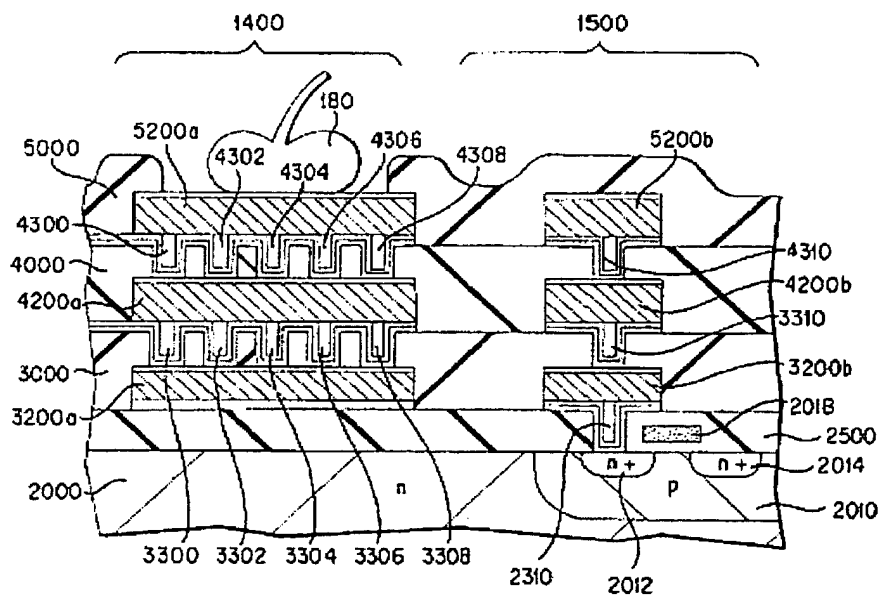
-8-

REMARKS

The Examiner has objected to the specification and claims. Such objections are deemed to be moot in view of the clarifications made hereinabove to the specification and claims.

The Examiner has rejected Claims 1, 3-18 and 20 under 35 U.S.C. 102(b) as being anticipated by Tanaka (US Patent Number: 6,100,589). Applicant respectfully disagrees with such rejection.

Specifically, the Examiner relies on internal circuit 1500 to make a prior art showing of applicant's claimed "active circuit" and then relies on an electrode 200 to make a prior art showing of applicant's claimed "metal layer." Note Figure 11 from Tanaka below. It should be further noted that, when reviewing the figure below, Tanaka considers the electrode 200 to be part of a bond pad, which is referred to as item 1400 in Figure 11.



Thus, given the Examiner's mapping between applicant's claim terms and the components shown above in Tanaka, the Examiner's proposed reference clearly fails to

-9-

meet applicant's claimed "metal layer disposed, at least partially, above the active circuit." Specifically, the electrode 200 of the bond pad 1400 (mapped to applicant's metal layer) is disposed directly to the side of (not above) the internal circuit 1500 (mapped to applicant's active circuit). Thus, it is clear that Tanaka fails to even suggest any sort of metal layer disposed, at least partially, above the active circuit, as claimed.

In fact, it appears that the Tanaka prior art is merely cumulative with respect to the prior art identified in applicant's background section of the originally filed specification. This is clearly evidenced by the side-by-side comparison below of Figure 11 of Tanaka and Figure 2 of applicant's originally filed specification.

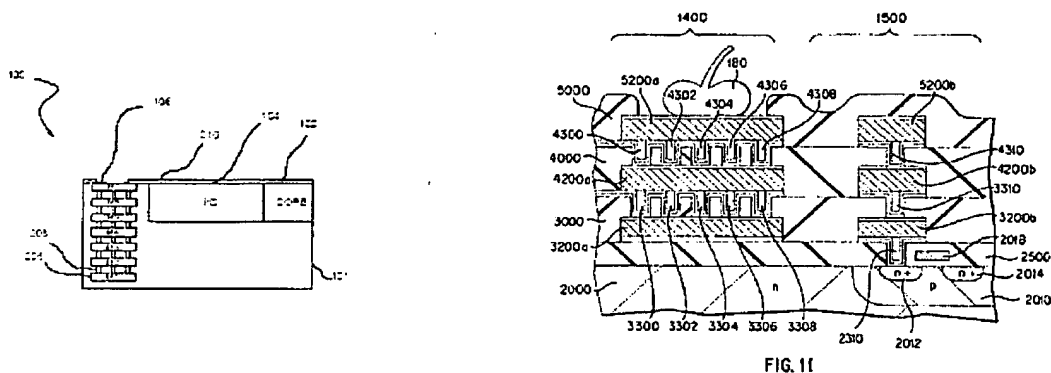


FIG. 2
(Prior Art)

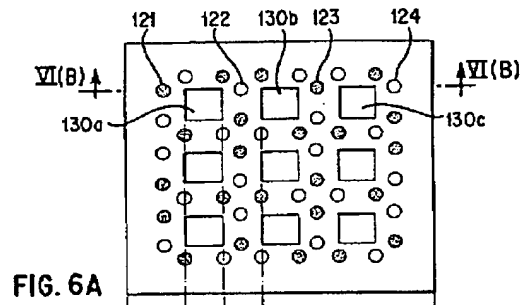
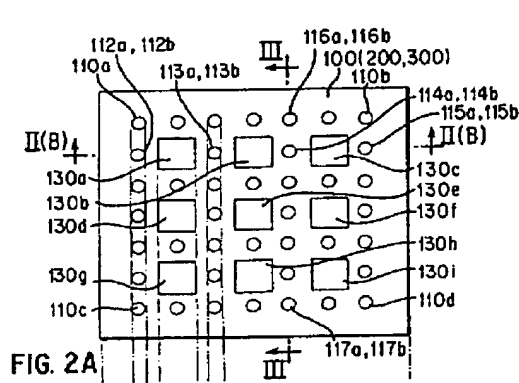
FIG. 11

The Examiner is reminded that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. Of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Moreover, the identical invention must be shown in as complete detail as contained in the claim. *Richardson v. Suzuki Motor Co.* 868 F.2d 1226, 1236, 9USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim.

-10-

This criterion has simply not been met by the Tanaka reference. A notice of allowance or a specific prior art showing of all of applicant's claim limitations, in combination with the remaining claim elements, is respectfully requested.

With respect to the dependent claims, applicant has carefully reviewed the excerpts relied upon by the Examiner to reject the same, and has found serious deficiencies in the Examiner's application of the prior art. Just by way of example, the Examiner relies on Tanaka to meet applicant's claimed "wherein the interconnect vias include at least two spaced rows for each of the first portions" and "wherein a width of the first portions is enlarged to accommodate the at least two spaced rows for each of the first portions" (see Claims 17-18 et al.). Following are pertinent figures from Tanaka.



Clearly, Tanaka fails to even suggest interconnect vias that include at least two spaced rows for each of the first portions, where a width of the first portions is enlarged to accommodate the at least two spaced rows for each of the first portions. Only applicant teaches and claims mesh first portions that have enlarged widths so that two spaced rows of vias are better supported.

Again, the aforementioned anticipation criterion has not been met. A notice of allowance or a specific prior art showing of all of applicant's claim limitations, in combination with the remaining claim elements, is respectfully requested.

-11-

The Examiner has rejected Claims 2 and 21 under 35 U.S.C. 103(a) as being unpatentable over Tanaka (US Patent Number: 6,100,589), in view of Applicant's Admitted Prior Art of Figures 1-2. Applicant respectfully disagrees with such rejection.

Specifically, the Examiner admits that Tanaka does not disclose the active circuit including an input/output bus and a plurality of vertically spaced underlying metal layers, at least partially, under the active circuit. The Examiner goes on to allege that Applicant's Admitted Prior Art of Figures 1-2 discloses an active circuit including an input/output bus and a plurality of vertically spaced underlying metal layers, at least partially, under the active circuit. Applicant respectfully disagrees with this assertion. Following is Prior Art Figure 2.

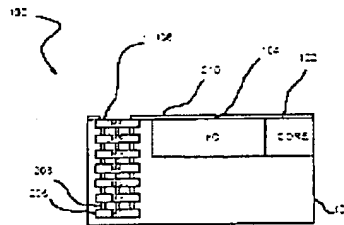


FIG. 2
(Prior Art)

Contrary to the Examiner's assertion, such figure clearly shows an active circuit including an input/output bus, and a plurality of metal layers that are side-by-side. Such metal layers are clearly not positioned under the active circuit.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir.1991).

-12-

Applicant respectfully asserts that at least the third element of the *prima facie* case of obviousness has not been met, since the prior art references, when combined, fail to teach or suggest all of the claim limitations, as noted above. A notice of allowance or a specific prior art showing of all of applicant's claim limitations, in combination with the remaining claim elements, is respectfully requested.

Still yet, applicant brings to the Examiner's attention the following additional dependent claims that have been added for full consideration:

"wherein the metal layer is disposed, at least partially, above the active circuit along a vertical axis" (see Claim 27);

"wherein the metal layer is disposed, at least partially, directly above the active circuit" (see Claim 28);

"wherein the inter-metal dielectric layer is constructed from a low-K dielectric material" (see Claim 29);

"wherein the inter-metal dielectric layer is constructed from a fluorinated silica glass (FSG) material" (see Claim 30); and

"wherein the mesh ensures that bonds are capable of being placed over the active circuit without damage thereto during a bonding process." (see Claim 31).

Yet again, a notice of allowance or a specific prior art showing of all of applicant's claim limitations, in combination with the remaining claim elements, is respectfully requested.

-13-

In the event a telephone conversation would expedite the prosecution of this application, the Examiner may reach the undersigned at (408) 971-2573. For payment of any additional fees due in connection with the filing of this paper, the Commissioner is authorized to charge such fees to Deposit Account No. 50-1351 (Order No. NVIDP234/P000825).

Respectfully submitted,

By: _____

Kevin J. Zilka

Reg. No. 41,429

Date: _____

01/10/05

Zilka-Kotab, PC
P.O. Box 721120
San Jose, California 95172-1120
Telephone: (408) 971-2573